



SEQUENCE LISTING

<110> HONG, GUOFAN

HUANG, WEI-HUA

<120> DNA POLYMERASE HAVING ABILITY TO REDUCE INNATE

SELECTIVE DISCRIMINATION AGAINST FLUORESCENT

DYE-LABELED DIDEOXYNUCLEOTIDES

<130> hongsequencelisting

<140> 09/157,397

<141> 1998-09-21

<150> 08/544,643

<151> 1995-10-18

<150> 08/642,684

<151> 1996-05-03

<160> 11

<170> PatentIn Ver. 2.0 - beta

<210> 1

<211> 1764

<212> DNA

<213> Bacillus stearothermophilus

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<213> Bacillus stearothermophilus

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Val Asn Glu His Gly Arg Phe Phe Met Arg Pro Glu Thr Ala Leu Ala

50

55

60

Asp Ser Gln Phe Leu Ala Trp Leu Ala Asp Glu Thr Lys Lys Lys Ser

65

70

75

80

Met Phe Asp Ala Lys Arg Ala Val Val Ala Leu Lys Trp Lys Gly Ile

85

90

95

Glu Leu Arg Gly Val Ala Phe Asp Leu Leu Leu Ala Ala Tyr Leu Leu

100

105

110

Asn Pro Ala Gln Asp Ala Gly Asp Ile Ala Ala Val Ala Lys Met Lys

115

120

125

Gln Tyr Glu Ala Val Arg Ser Asp Glu Ala Val Tyr Gly Lys Gly Val

130

135

140

Lys Arg Ser Leu Pro Asp Glu Gln Thr Leu Ala Glu His Leu Val Arg

574

145

150

155

160

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165

170

175

Arg Asn Asn Glu Gln Asp Gln Leu Leu Thr Lys Leu Glu His Ala Leu

180

185

190

Ala Ala Ile Leu Ala Glu Met Glu Phe Thr Gly Val Asn Val Asp Thr

195

200

205

Lys Arg Leu Glu Gln Met Gly Ser Glu Leu Ala Glu Gln Leu Arg Ala

210

215

220

Ile Glu Gln Arg Ile Tyr Glu Leu Ala Gly Gln Glu Phe Asn Ile Asn

225

230

235

240

Ser Pro Lys Gln Leu Gly Val Ile Leu Phe Glu Lys Leu Gln Leu Pro

245

250

255

625

Val Leu Lys Lys Thr Lys Thr Gly Tyr Ser Thr Ser Ala Asp Val Leu

260

265

270

Glu Lys Leu Ala Pro His His Glu Ile Val Glu Asn Ile Leu His Tyr

275

280

285

Arg Gln Leu Gly Lys Leu Gln Ser Thr Tyr Ile Glu Gly Leu Leu Lys

290

295

300

Val Val Arg Pro Asp Thr Gly Lys Val His Thr Met Phe Asn Gln Ala

305

310

315

320

Leu Thr Gln Thr Gly Arg Leu Ser Ser Ala Glu Pro Asn Leu Gln Asn

325

330

335

Ile Pro Ile Arg Leu Glu Glu Gly Arg Lys Ile Arg Gln Ala Phe Val

340

345

350

Pro Ser Glu Pro Asp Trp Leu Ile Phe Ala Ala Asp Tyr Ser Gln Ile

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Glu Leu Arg Val Leu Ala His Ile Ala Asp Asp Asp Asn Leu Ile Glu

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Ala Phe Gln Arg Asp Leu Asp Ile His Thr Lys Thr Ala Met Asp Ile

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Phe Gln Leu Ser Glu Glu Glu Val Thr Ala Asn Met Arg Arg Gln Ala

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410

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Lys Ala Val Asn Phe Gly Ile Val Tyr Gly Ile Ser Asp Tyr Gly Leu

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Ala Gln Asn Leu Asn Ile Thr Arg Lys Glu Ala Ala Glu Phe Ile Glu

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445

Arg Tyr Phe Ala Ser Phe Pro Gly Val Lys Gln Tyr Met Glu Asn Ile

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455

460

Val Gln Glu Ala Lys Gln Lys Gly Tyr Val Thr Thr Leu Leu His Arg

465

470

475

480

Arg Arg Tyr Leu Pro Asp Ile Thr Ser Arg Asn Phe Asn Val Arg Ser

485

490

495

Phe Ala Glu Arg Thr Ala Met Asn Thr Pro Ile Gln Gly Ser Ala Ala

500

505

510

Asp Ile Ile Lys Lys Ala Met Ile Asp Leu Ala Ala Arg Leu Lys Glu

515

520

525

Glu Gln Leu Gln Ala Arg Leu Leu Leu Gln Val His Asp Glu Leu Ile

530

535

540

Leu Glu Ala Pro Lys Glu Glu Ile Glu Arg Leu Cys Glu Leu Val Pro

545

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555

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Glu Val Met Glu Gln Ala Val Thr Leu Arg Val Pro Leu Lys Val Asp

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Tyr His Tyr Gly Pro Thr Trp Tyr Asp Ala Lys

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<210> 3

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<212> DNA

<213> *Bacillus stearothermophilus*

<400> 3

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<213> Bacillus stearothermophilus

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Glu Val Met Glu Glu Asn Tyr His Asp Ala Pro Ile Val Gly Ile Ala

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Leu Val Asn Glu His Gly Arg Phe Phe Met Arg Pro Glu Thr Ala Leu

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Ala Asp Ser Gln Phe Leu Ala Trp Leu Ala Asp Glu Thr Lys Lys Lys

65

70

75

80 .

Ser Met Phe Asp Ala Lys Arg Ala Val Val Ala Leu Lys Trp Lys Gly

85

90

95

Ile Glu Leu Arg Gly Val Ala Phe Asp Leu Leu Leu Ala Ala Tyr Leu

100

105

110

Leu Asn Pro Ala Gln Asp Ala Gly Asp Ile Ala Ala Val Ala Lys Met

115

120

125

Lys Gln Tyr Glu Ala Val Arg Ser Asp Glu Ala Val Tyr Gly Lys Gly

130

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Val Lys Arg Ser Leu Pro Asp Glu Gln Thr Leu Ala Glu His Leu Val

145

150

155

160

Arg Lys Ala Ala Ala Ile Trp Ala Leu Glu Gln Pro Phe Met Asp Asp

165

170

175

Leu Arg Asn Asn Glu Gln Asp Gln Leu Leu Thr Lys Leu Glu His Ala

180

185

190

Leu Ala Ala Ile Leu Ala Glu Met Glu Phe Thr Gly Val Asn Val Asp

195

200

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Thr Lys Arg Leu Glu Gln Met Gly Ser Glu Leu Ala Glu Gln Leu Arg

210

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Ala Ile Glu Gln Arg Ile Tyr Glu Leu Ala Gly Gln Glu Phe Asn Ile

225

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235

240

1483

Asn Ser Pro Lys Gln Leu Gly Val Ile Leu Phe Glu Lys Leu Gln Leu

245

250

255

Pro Val Leu Lys Lys Thr Lys Thr Gly Tyr Ser Thr Ser Ala Asp Val

260

265

270

Leu Glu Lys Leu Ala Pro His His Glu Ile Val Glu Asn Ile Leu His

275

280

285

Tyr Arg Gln Leu Gly Lys Leu Gln Ser Thr Tyr Ile Glu Gly Leu Leu

290

295

300

Lys Val Val Arg Pro Asp Thr Gly Lys Val His Thr Met Phe Asn Gln

305

310

315

320

Ala Leu Thr Gln Thr Gly Arg Leu Ser Ser Ala Glu Pro Asn Leu Gln

325

330

335

Asn Ile Pro Ile Arg Thr Pro Leu Gly Arg Lys Ile Arg Gln Ala Phe

340

345

350

Val Pro Ser Glu Pro Asp Trp Leu Ile Phe Ala Ala Asp Tyr Ser Gln

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365

Ile Glu Leu Arg Val Leu Ala His Ile Ala Asp Asp Asp Asn Leu Ile

370

375

380

Glu Ala Phe Gln Arg Asp Leu Asp Ile His Thr Lys Thr Ala Met Asp

385

390

395

400

Ile Phe Gln Leu Ser Glu Glu Glu Val Thr Ala Asn Met Arg Arg Gln

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410

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Ala Lys Ala Val Asn Tyr Gly Ile Val Tyr Gly Ile Ser Asp Tyr Gly

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425

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445

Ile Arg Tyr Phe Ala Ser Phe Pro Gly Val Lys Gln Tyr Met Glu Asn

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Ile Val Gln Glu Ala Lys Gln Lys Gly Tyr Val Thr Thr Leu Leu His

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Arg Arg Arg Tyr Leu Pro Asp Ile Thr Ser Arg Asn Phe Asn Val Arg

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Ser Phe Ala Glu Arg Thr Ala Met Asn Thr Pro Ile Gln Gly Ser Ala

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510

Ala Asp Ile Ile Lys Lys Ala Met Ile Asp Leu Ala Ala Arg Leu Lys

515

520

525

Glu Glu Gln Leu Gln Ala Arg Leu Leu Leu Gln Val His Asp Glu Leu

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